

Work Order ID 60608

Page 1

Thursday, July 15, 2010 10:24:21 AM

Item ID: D206-642-541

Accept



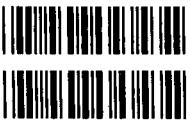
Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date: 10-7-15 Tooling:

Date: _____

Run Start



QC: _____

Date: _____ SPC (Y/N): _____

Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3274	D								
IIN-D206-642	Rev M								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 60608

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Item ID: D206-642-541

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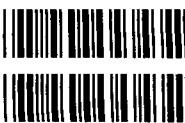
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Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

110



Skidtubes

0.00

Skidtubes

Memo

0.00

****VERIFY AND INSPECT THE MATERIAL PRIOR TO USE****

1- Bend FWD end of tube using bend prog D3274 FWD and foilo 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QSI004

AR Aluminum Rod Batch: M112507/M114242

4- grind fwd cap weld on top surface only

BE 10/07/21BE 10/07/21

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.
Drill 3/16" pilot holes as per Dwg D3274

8 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

DP 10-7-2010/17/20BE 10/07/21

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120



HandFinish

Chemical Conversion Coat per QSI005 4.1

0.00

140/7/21

Hand Finishing

Memo

0.00

130



QC

QC3- Inspect Part Finish

0.00

S 10/02/21

Quality Control

Memo

0.00

140



QC

QC5- Inspect part completeness to step on W/O

0.00

S 10/02/21

Quality Control

Memo

0.00

OK

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open Ø0.313" and 0.375" crossbolt spacer holes using DT8743 as per Dwg D3274								<i>BE 10/07/21</i>
	2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube								
	3-Bond web in place as per Dwg D3274 & QSI 015. A/R <input type="checkbox"/> Sikaflex-291 <u>11/21/11</u> <input type="checkbox"/> Sikaflex expire date: <u>01/2011</u> <input type="checkbox"/> Start: <u>10/07/21</u> Time: <u>2:30</u> <input type="checkbox"/> Finish: <u>10/07/21</u> Time: <u>8:30 AM</u> <input type="checkbox"/> (Adhere for 12 hours)								

160



QC

Quality Control

QC5- Inspect part completeness to step off W/O

0.00

S volariz

Memo

0.00

Q _____

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

170

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

0.00

Skidtubes

Memo

0.00

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

Skidtubes

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2
OPEN HOLES TO .297". Deburr

Skidtubes

3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD
END OF TUBE
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

Skidtubes

4- Countersink crossbolt spacer holes as per Dwg D3274

Skidtubes

5- prepare for welding

180



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

$h = 3.10"$
 $L = 24.9"$

Memo

0.00

S 10/07/26

10-7-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



Skidtubes

0.00

Skidtubes

Memo

0.00

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R Aluminum Rod M112507

3-Grind cross bolt welds flush as per Dwg D3274.

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

200



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
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Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210



QC10- Inspect visual per QSI004- ground welds

0.00

SOLVER

0.00

QC

Quality Control

220



Pressure Wash per QSI005 4.3

0.00

=> M 10/21/29

0.00

HandFinish

Hand Finishing

Memo

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

230



White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

START TIME: 11:00
OVEN TEMPERATURE: 320°
FINISH TIME: 11:30

0.00

1 BK 10-8-4.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Start Date: 7/15/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 7/22/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240



QC3- Inspect Part Finish

0.00

ml 10 08 25 ①

QC

Quality Control

250



HandFinishing

0.00

ml 10 08 25

HandFinish

Hand Finishing

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.

A/R N/A LPS-3 119945

2-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a

A/R Sikaflex-291 115114 Sikaflex expire date: 11/01

260



QC5- Inspect part completeness to step on W/O

0.00

S.060124

QC

Quality Control

Memo

0.00

Inspect Nut Plate & Inserts

④0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270



HAND FINISHING RESOURCE #1

HandFinish

Hand Finishing

0.00

Memo

0.00

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R Sikaflex-291 11/14
Sikaflex expire date: 11/01

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3
A/R LPS-3 Batch: _____

N/A

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R Sikaflex-291 11/14
Sikaflex expire date: 11/01

280



QC5- Inspect part completeness to step on W/O

0.00

QC

Quality Control

Memo

0.00

8 10/04/10

40

W/O:		WORK ORDER CHANGES					
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Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

290



Packaging

Packaging

Operation
Description

Identify as per dwg & Stock Location:

Set Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

Memo

PPP
60601

0.00

7/15/30 C

300



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/08/30 JJ
C2108130

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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Picklist Print

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Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Comments:	IPP Rev:B 05.09.23 Revised per D206-642 Rev. J/K/JLM
IPP Rev:C	07-02-23 Added SS Wearplates & Gaskets JLM
IPP Rev:D	07-12-06 replace NAS1515H3L to D3672-1 DD
IPP Rev:E	08-04-17 as per PAR 08-015 DD verified by:EC
IPP Rev:F	08-06-02 add comment DD verified by:EC
IPP Rev:G	08-10-09 revise details DD verified by:EC

Start Qty: 1,00

Required Qty: 1.00

Start Qty: 1.00

Required Qty: 1.00

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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No 190 Each 69.0000 1 1



Cross Bolt Spacer

Location Loc Qty Loc Code
LG 69 B60652 *12 BE 10/07/28
58545 69

D3275-1 Manufactured No 190 Each 17.0000 12 12



Crossbolt Spacer

Location Loc Qty Loc Code
LG 17 B60653 *12 BE 10/07/28
53453 8
57513 9

CR3212-4-03 Purchased No 250 Each 3,739.000 2 2



Cherry Rivet

Location Loc Qty Loc Code
ST311 3739 ml 10-08-26
111359 5
112314 30
114436 1142
114450 564
114859 1998

D3415-041 Manufactured No 250 Each 61.0000 1 1



Nut Plate

Location Loc Qty Loc Code
ST056 61 ml 10-08-26
33842 61

W/O:		WORK ORDER CHANGES					
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Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-3

Purchased

No

250

Each

540.0000

2

2



Cherry Rivet

10-08-26

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST311	540	
112314	4	
113539	60	
113973	476	

ALS4-1032-130

Purchased

No

250

Each

4,506.000

78

78



Insert

10-08-26

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11	4190	
114723	4190	
ST282	277	
110511	38	
114407	239	
ST381	39	
114654	39	

D3536-15

Manufactured

No

270

Each

13.0000

1

1



Gasket

10-08-26

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	6	
56055	6	
FP11	7	
59238	7	

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Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3536-23



Manufactured

No

270

Each

6.0000

1

1



Gasket

B# 60864

MD 10-08-26

D3536-35



Manufactured

No

270

Each

11.0000

1

1



Gasket

B# 60235

MD 10-08-26

D3536-39



Manufactured

No

270

Each

21.0000

1

1



Gasket

Location

Loc Qty

Loc Code

FP012

11

58683

11

MD 10-08-26

D3535-15



Manufactured

No

270

Each

10.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP12

21

58215

7

58571

14

MD 10-08-26

D3535-35



Manufactured

No

270

Each

7.0000

1

1



Wearshoe

B# 60232

MD 10-08-26

Location

Loc Qty

Loc Code

FP018

7

59236

7

59237

7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:24:25 AM

Page 5

Work Order ID: 60608



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

D3535-39



Manufactured No

270

Each

8.0000

1

Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP18	8	
	8	

ML 10-08-26

D3535-23



Manufactured No

270

Each

5.0000

1

Wearshoe

B60864

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP21	5	
	5	

ML 10-08-26

D3537-3



Manufactured No

270

Each

20.0000

1

Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP17	4	
	4	

ML 10-08-26

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP19	16	
	16	

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
59711	16	
	16	

D3537-1



Manufactured No

270

Each

44.0000

9

Wearpad

B60491

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	1	
	1	

ML 10-08-26

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
55465	43	
	3	

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
57713	3	
	40	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Thursday, July 15, 2010 10:24:25 AM

Page 6

Work Order ID: 60608



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN960C10L

NAS1149C0332
R

Purchased

No

270

Each

0.0000

80

80

washer

AN960C416

NAS1149C0463
R

Purchased

No

270

Each

113.0000

1

1

ML 10-08-26

washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST346	113	
<u>100993</u>	113	

D3672-1

Manufactured

No

270

Each

1,033.000

2

2

ML 10-08-26

Phenolic Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST077	1033	
51674	33	
<u>52505</u>	1000	

AN3C4A

Purchased

No

270

Each

1,559.000

80

80

ML 10-08-26

BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST350	1559	
114103	501	
114108	14	
114416	12	
114523	2	
114859	30	
<u>114941</u>	1000	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 7

Thursday, July 15, 2010 10:24:25 AM

Work Order ID: 60608



Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 7/15/2010

Required Date: 7/22/2010

Start Qty: 1.00

Required Qty: 1.00

AN4C5A



Purchased

No

270

Each

513.0000

1

1



BOLT

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>	
	ST346	513		
	110552	13		
	112243	500		

M 10-08-26

D2646



Manufactured

No

270

Each

94.0000

1

1



Aft Cap

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>	
	FP-4	85		
	57332	85		
	FP6	9		
	52663	9		

M 10-08-26

D3413-1



Manufactured

No

270

Each

31.0000

1

1



Ring

A B# 61322

	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>	
	ST473	31		
	51586	1		
	53446	23		
	58524	7		

M 10-08-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN CP	DRAWN BY <i>PH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY	SCALE NTS
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

RELEASED

07.02.12 *#*

DEO ATTACHED

Qty -041	Qty -043	Part Number	Description	SHOP COPY	RETURN TO ENGINEERING	UNCONT ROLLED COPY	SUBJECT	NOTICE	WORK ORDER	AMENDMENT
X		D3274-041	SKIDTUBE ASSEMBLY							
	X	D3274-043	SKIDTUBE ASSEMBLY							
1	1	D2600-1-240	EXTRUSION							
1	1	D2646	AFT CAP							
12	12	D2649	CROSS BOLT SPACER							
12	37	D3275-1	CROSS BOLT SPACER							
1	1	D3282-041	FLOAT WEB							
1	1	D3285-1	CAP							
1	1	D3413-1	RING							
1	1	D3415-041	NUT PLATE							
1	1	D3535-15	WEARSHOE							
1	1	D3535-23	WEARSHOE							
1	1	D3535-35	WEARSHOE							
1	1	D3535-39	WEARSHOE							
1	1	D3536-15	GASKET							
1	1	D3536-23	GASKET							
1	1	D3536-35	GASKET							
1	1	D3536-39	GASKET							
9	9	D3537-1	WEARPAD							
1	1	D3537-3	WEARPAD							
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)							
80	80	AN3C4A	BOLT							
1	1	AN4C5A	BOLT							
1	1	AN960C416	WASHER							
80	80	AN960C10L	WASHER							
2	2	CCR264SS3-3	RIVET							
2	2	CR3212-4-03	RIVET							
2	2	NAS1515H3L	WASHER							

GENERAL NOTES:

1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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URX-08
28/07/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

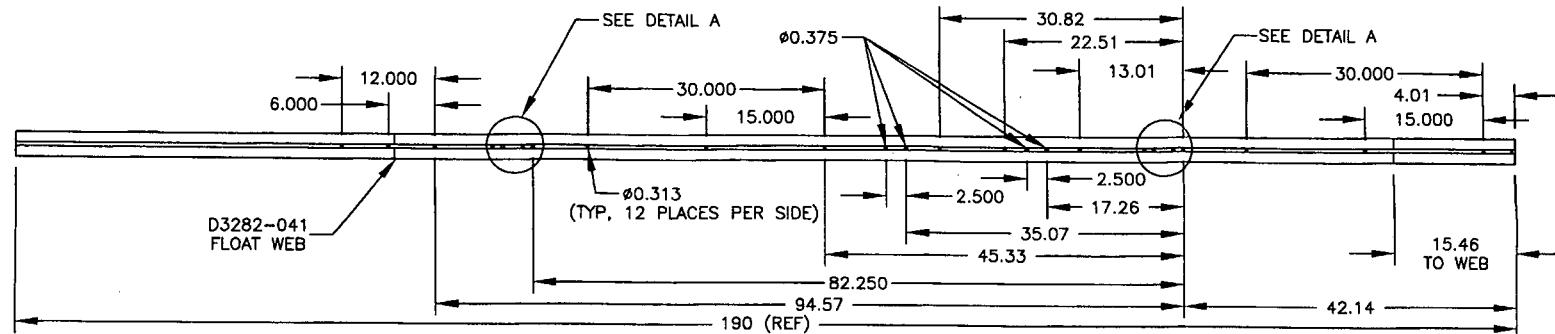
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

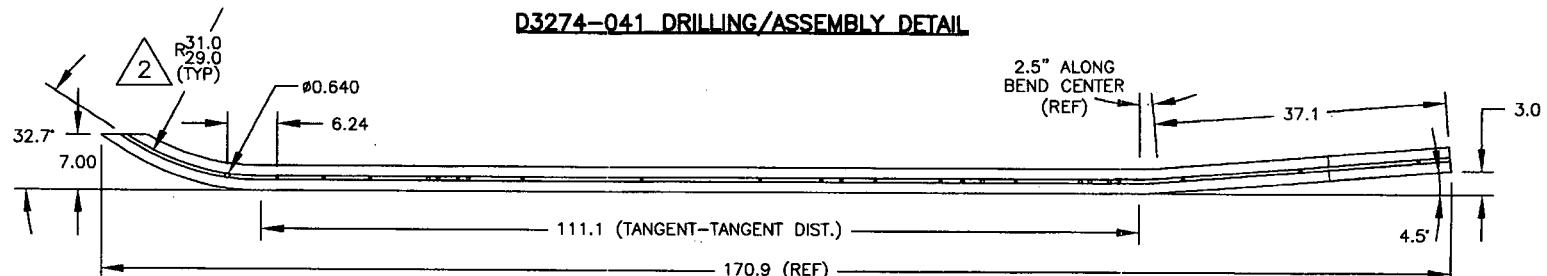
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

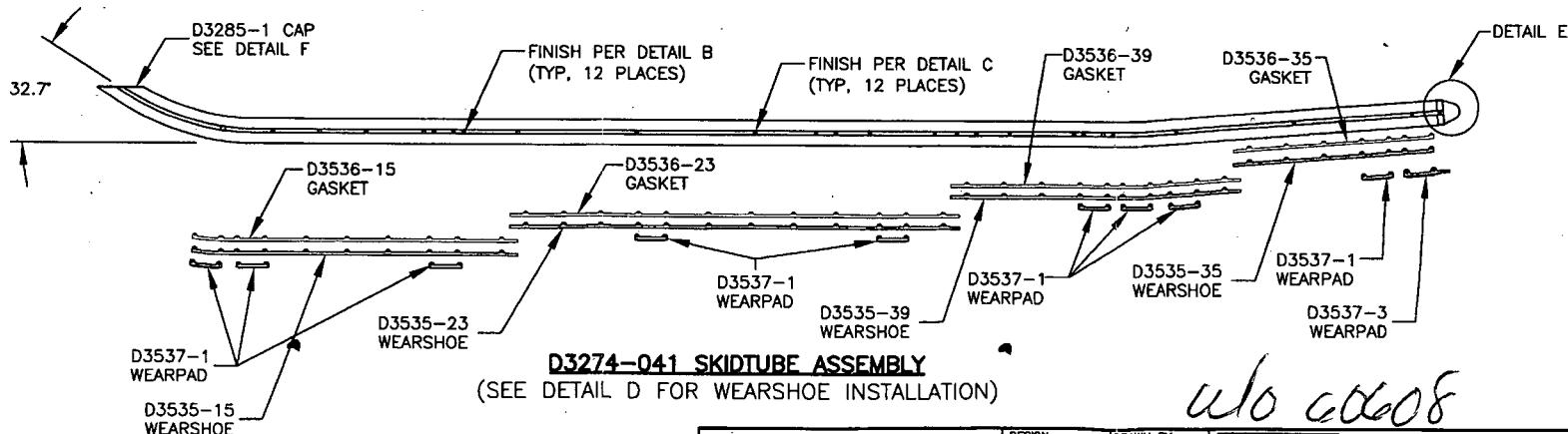
DEO ATTACHED



D3274-041 DRILLING/ASSEMBLY DETAIL



D3274-041 BEND/DRILLING DETAIL



D3274-041 SKIDTUBE ASSEMBLY

ab cd08

RELEASED
07-27-2024

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		CP	PH			
CHECKED		APPROVED		DRAWING NO.	REV. D	
				D3274	SHEET 2 OF 4	
DATE		TITLE		SCALE		
06.12.19		SKIDTUBE ASSEMBLY				1:15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

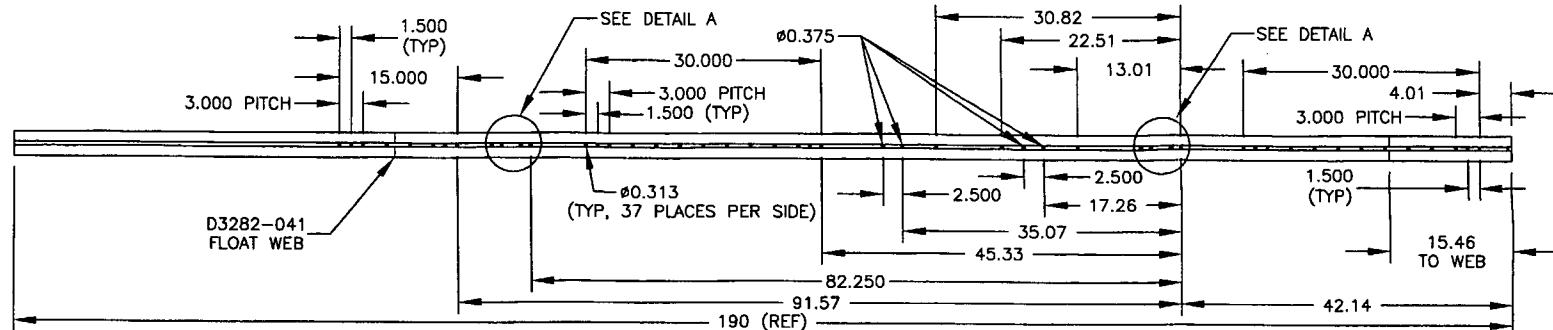
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

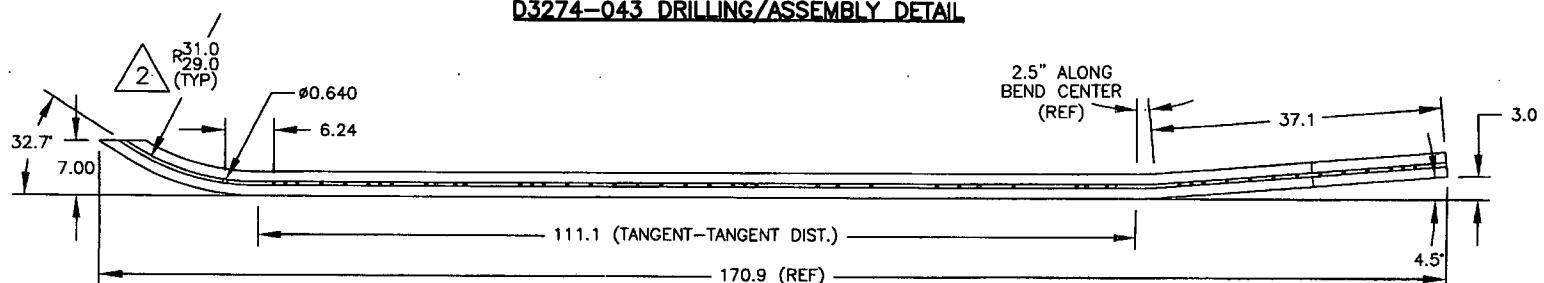
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

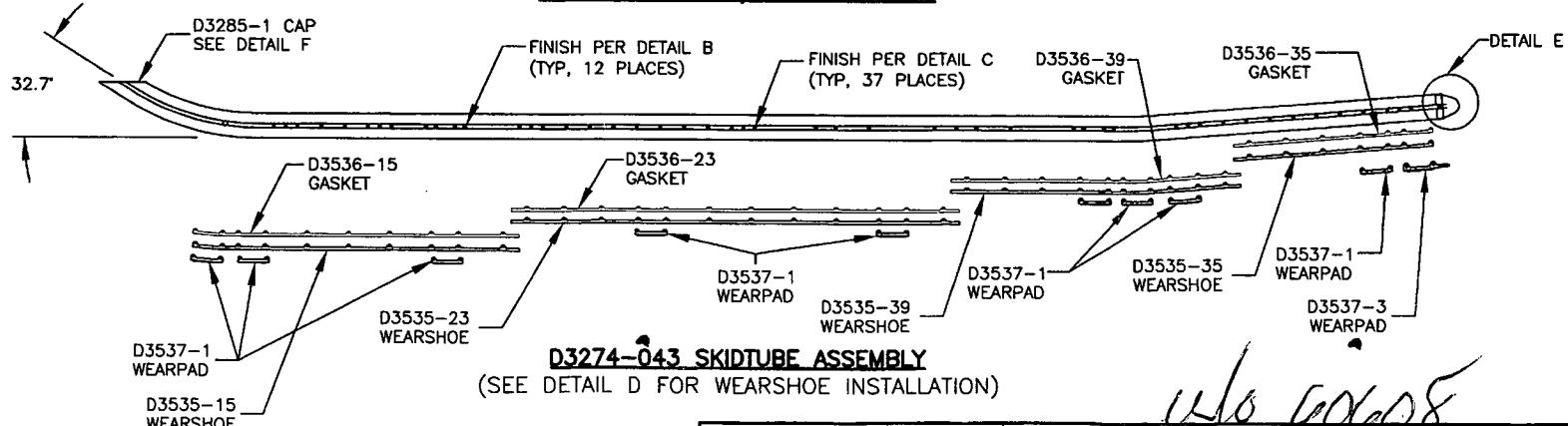
DEO ATTACHED



D3274-043 DRILLING/ASSEMBLY DETAIL



D3274-043 BEND/DRILLING DETAIL



D3274-043 SKIDTUBE ASSEMBLY
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

110-00008

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			REV. D
			SHEET 3 OF 4
DATE 06.12.19	TITLE SKIDTUBE ASSEMBLY	SCALE 1:15	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

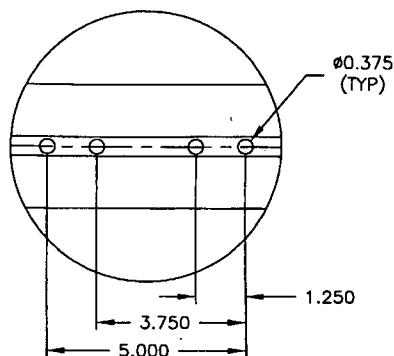
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

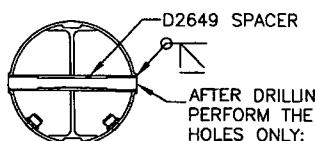
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

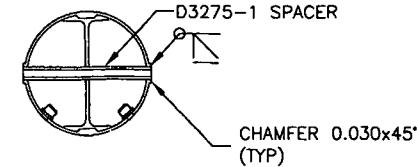
DETAIL A: DRILL DETAIL



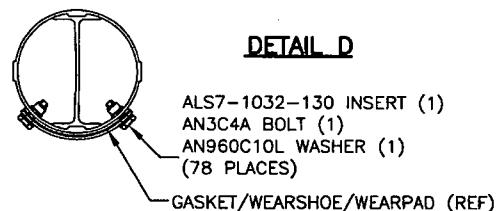
DETAIL B
FOR $\phi 0.375$ HOLES ONLY



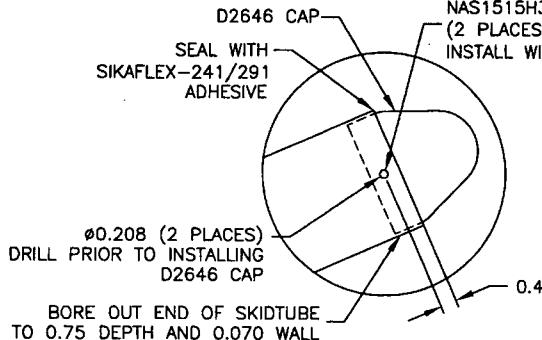
DETAIL C
FOR $\phi 0.313$ HOLES ONLY



DETAIL D



DETAIL E
AN3C4A BOLT (1)
AN960C10L WASHER (1)
NAS1515H3L WASHER (1)
(2 PLACES)
INSTALL WITH SIKAFLEX-241/-291



AN4C5A BOLT (1)
AN960C416 WASHER (1)
INSTALL WITH SIKAFLEX-241/-291

1.0
REMOVE RIDGE
ON INSIDE OF
SKIDTUBE LEAVE
0.070 MIN.

ORIENTATION
OF D3415-041

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CP

DRAWN BY

PH

DART

DART AEROSPACE USA, INC.

PORT HUDDLE, VA

CHECKED

H

APPROVED

H

DRAWING NO.

D3274

REV. D

DATE

06.12.19

SHEET 4 OF 4

TITLE

SKIDTUBE ASSEMBLY

SCALE

DET ATTACHED

RELEASED

07.02.12 H

DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041
PRIOR TO FINISH

11060608

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

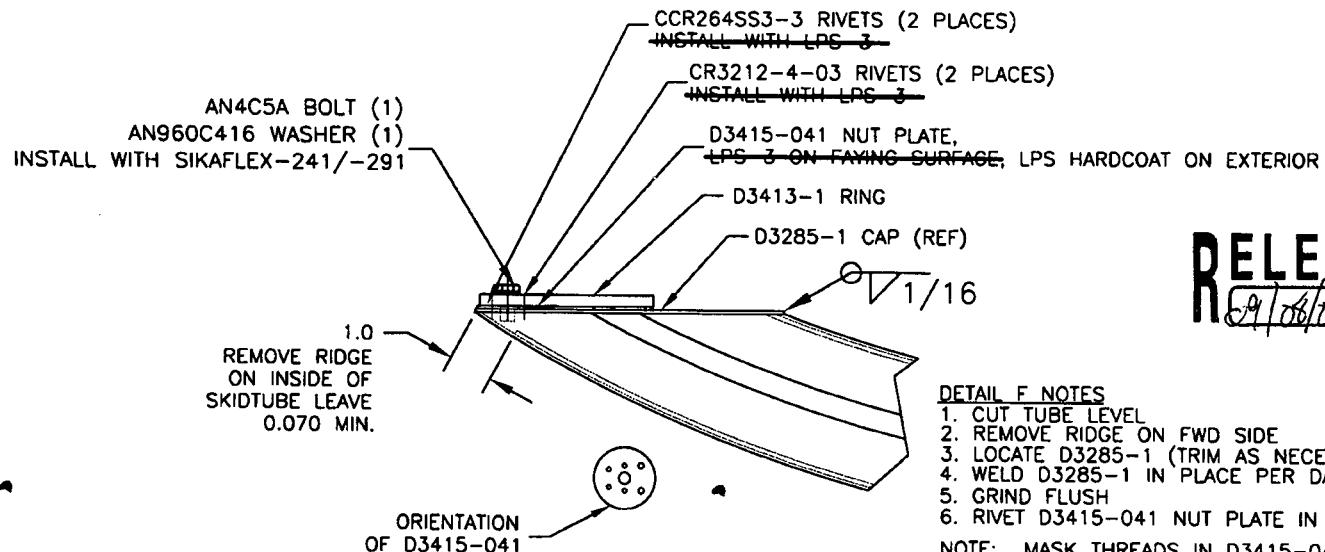
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>JP</i>	CHECKED		MFG. APPR. <i>M</i>	APPROVED <i>JAF</i>	DE APPR. <i>TH</i>	
DATE 09.06.17	DATE 09.06.23		DATE 09/06/23	DATE 09/06/23	DATE 09.06.23	

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: "~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~
~~COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.~~"

AMEND DETAIL F AS SHOWN:

DETAIL F: END FINISHING DETAIL



DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041 PRIOR TO FINISH

also 60608

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 235

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Berclay Elliot
Job number: 59780
Part number: D206-642-541
Description: 20G Skid tube
Welding Process: Tig Mig []
Base material: Aluminium
Current: AC DC []

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier B. Ell Date of Test Coupon 10.07.01

Welder Berclay Elliot Date of Test Coupon 10.07.01

The above named individual is qualified in accordance with AWS D17.1.2001 to weld